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## A NEW SPECIES OF THE GENUS *SPINIMEGOPIS* K. OHBAYASHI, 1963 (COLEOPTERA: CERAMBYCIDAE, PRIONINAE) FROM SOUTH VIETNAM

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**Summary.** *Spinimegopis bezborodovi* Koshkin, sp. n. is described from South Vietnam (Lam Dong province, Lang Bian Plateau). New species most is similar to *S. lividipennis* (Lameere, 1920) but differs from latter by coloration of body, by specific pattern of pronotum, by shape and size of spine of anterior angle of pronotum, by antennae length, by lower density of granules on 1st–3rd antennal segments and profemur, by smaller ratio of the lengths of the third and first antennal segments of males, and by features of morphology of male terminalia (especially tegmen and eight sternite).

**Key words:** Coleoptera, Cerambycidae, Prioninae, taxonomy, new species, Vietnam.

**Е. С. Кошkin. Новый вид рода *Spinimegopis* K. Ohbayashi, 1963 (Coleoptera: Cerambycidae, Prioninae) из Южного Вьетнама // Дальневосточный энтомолог. 2018. N 352. С. 1-8.**

**Резюме.** Из Южного Вьетнама (провинция Лам Донг, плато Лангбиан) описан новый вид *Spinimegopis bezborodovi* Koshkin, sp. n. От внешне сходного

вида *S. lividipennis* (Lameere, 1920) новый вид отличается окраской тела, характерным рисунком переднеспинки, формой и размером зубца переднего угла переднеспинки, длиной антенн, меньшей плотностью гранул на 1–3 antennalных сегментах и на переднем бедре, меньшим соотношением длин третьего и первого сегментов антенн самцов и особенностями строения гениталий самца, особенно тегмена и восьмого стернита.

## INTRODUCTION

The genus *Spinimegopis* K. Ohbayashi, 1963 belongs to the tribe Aegosomatini Thomson, 1861 (Cerambycidae, Prioninae) and currently includes 20 species (Komiya & Drumont, 2007; Feng & Chen, 2009). Species of genus *Spinimegopis* distributed in East, South-East and South Asia. The genus *Spinimegopis* is similar to the genus *Aegosoma* but is distinguished by having segment 3 of antenna subcylindrical and without internal groove, and by pronotum furnished with three distinct spines on each side. *Spinimegopis* includes five species-groups. *Spinimegopis lividipennis* species-group currently includes four species: *S. lividipennis* (Lameere, 1920), *S. malasiaca* (Hayashi, 1976), *S. fujitai* Komiya et Drumont, 2007 and *S. delahayei* Komiya et Drumont, 2007. Inclusion of these species in one species-group based on presence a distinct subvertical process on anterior margin of prosternum (Komiya & Drumont, 2007). The study beetles belongs to *Spinimegopis lividipennis* species-group stored in my collection shown that specimens of *Spinimegopis* sp. collected in South Vietnam (Lam Dong province) differ from all known species and represent undescribed species. The description of this new species, *S. bezborodovi* sp. n., is given below in this paper and the habitus and male terminalia is illustrated. Holotype and one paratype are deposited in the collection of ZMMU – Zoological Museum of Moscow University (Russia, Moscow); two paratypes are stored in CK – the collection of Evgenii Koshkin (Russia, Khabarovsk). The terminology of male terminalia follows Ren & Chen (2016).

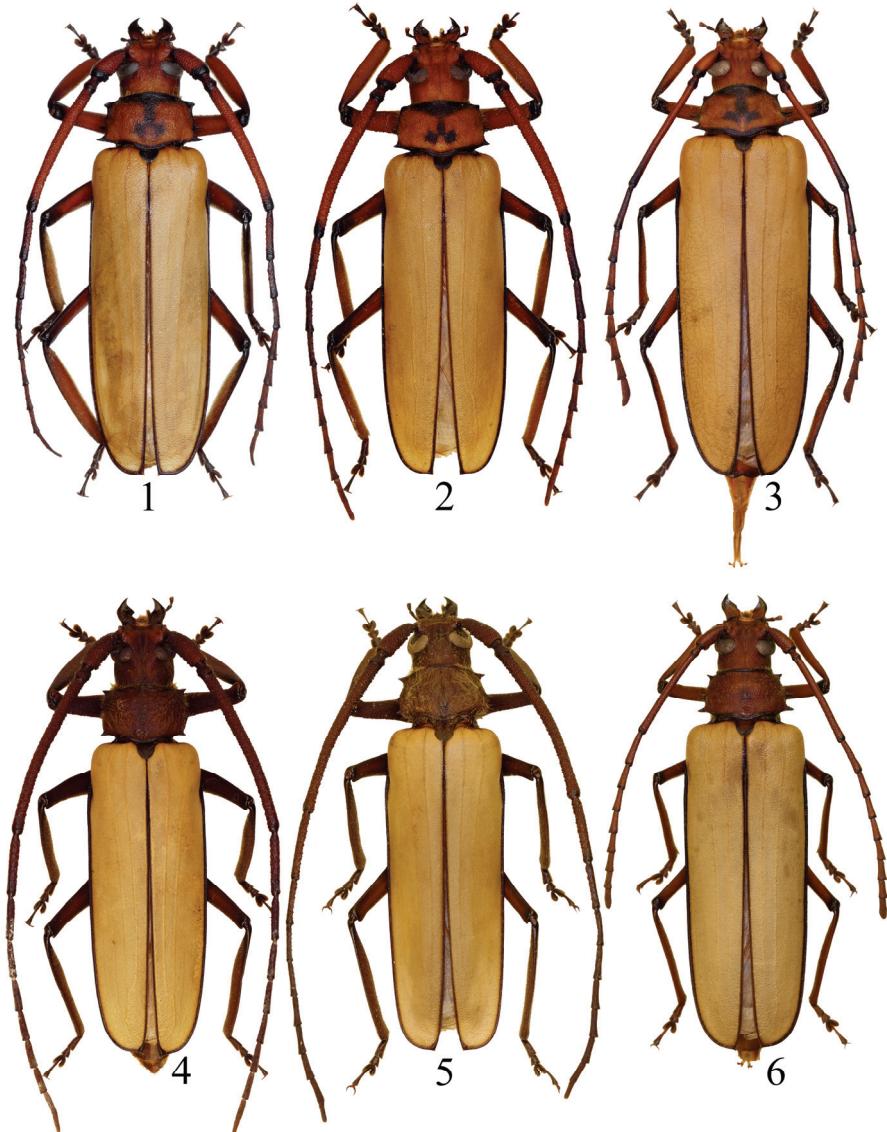
## DESCRIPTION OF A NEW SPECIES

### *Spinimegopis bezborodovi* Koshkin, sp. n.

Figs 1–3, 7–9, 13, 15, 17

MATERIAL. Holotype – ♂, Vietnam: Lam Dong province, Lac Duong district, Bidoup Núi Bà National Park, 25.IV 2016, local collector leg. (ZMMU). Paratypes: 1 ♀, same data as holotype (ZMMU); Lam Dong province, Bidoup Núi Bà National Park, Hòn Giao, 1500 m, VI 2017, 1 ♂, 1 ♀, Van Dang leg. (CK).

DESCRIPTION. Male (Figs 1, 2). Body is relatively light brown-reddish for the most parts. Tips of mandibles, eyes, part of pronotum, scutellum, parts of legs, ends of antennal segments are blackish. Elytra light brownish-yellow margined with distinct black lines. Head, pronotum, scutellum and underside covered with short yellowish hairs.



Figs. 1–6. *Spinimegopis* spp., habitus, dorsal view. 1–3 – *S. bezborodovi* sp. n.: 1 – male holotype, 35.3 mm; 2 – male paratype, 42 mm; 3 – female paratype, 44 mm; 4–6 – *S. lividipennis*: 4 – male, 39 mm (Central Vietnam: Kon Tum province, Dak Glei district, Ngọc Linh, IV 2016); 5 – male, 39 mm (North Thailand: Chiang Mai province, Fang, V 2014); 6 – female, 41.3 mm (North Vietnam: Lao Cai province, Sa Pa, V 2017).

Head about as long as wide, sparsely granulated (Fig. 7). Antennal tubercles fairly large, granulated at base and very finely punctated in apical part. Median furrow narrow and shallow. Mandibles short, external lines abruptly bent inwards at middle; internal side with large tooth. Eyes fairly large; interspace between eyes slightly wider than a half of each lobe in dorsal view and twice as large in ventral view.

Antennae 11-segmented, slightly longer than body, ratio antenna length (measured from the base of scape to the apex of segment 11) / body length (from the clypeus to the apex of elytra) 1.03–1.11. Segments 1–5 distinctly granulated; segments 1–4 are thick, segments 5–11 slender. Segment 1 (scape) with distinct longitudinal groove on inner side. Segment 3 is the longest, its length 0.96–0.98 combined length is next three segments and 2.7 length is scape. Ratio segment 3 / segments 4 +5+6 is 1.15–1.17. Antennae very sparsely covered with very short setae, which are noticeable only with large magnification power.

Pronotum wide, trapezoidal shape, ratio maximum width / length 0.66–0.67 (Fig. 7). On each side of pronotum three straight spines; spine of posterior angle and lateral spine are well expressed and acute, spine of anterior angle is small, not acute. The color of pronotum is brown-reddish with distinct pattern consisting narrow black bordering, big black spot of crescent form at anterior margin and black spot as three-leaved figure in centre of pronotum. Scutellum semicircular with surface covered with fine punctuation and sparse hairs.

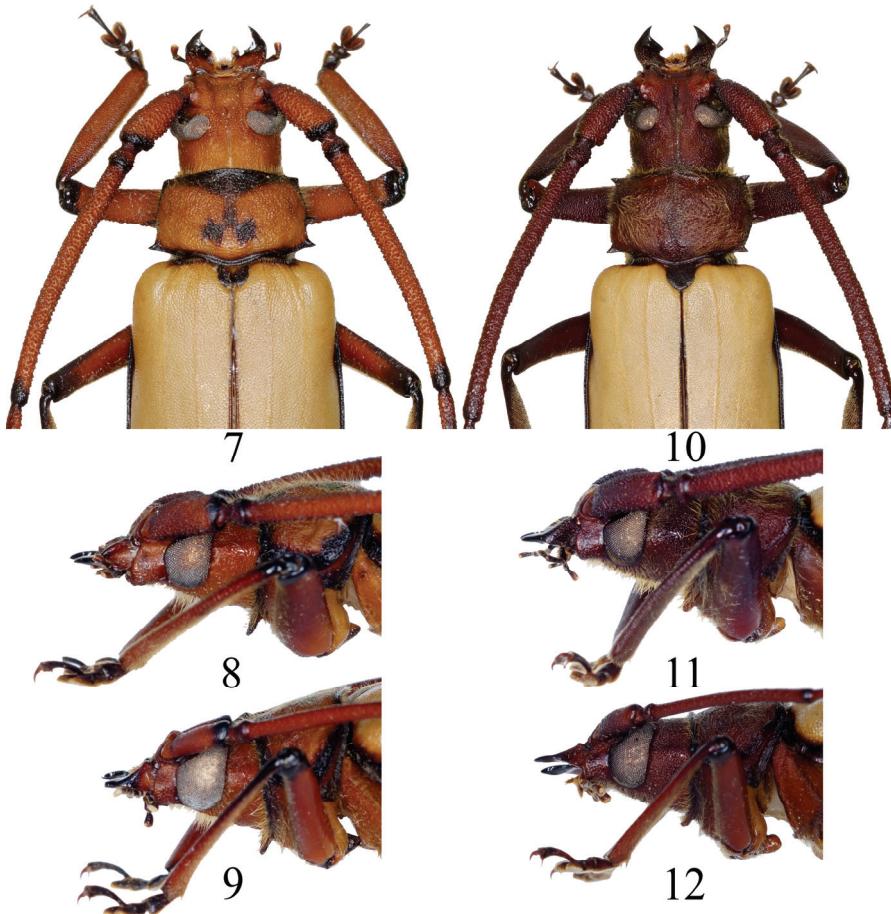
Elytra flattened, subparallel, long, 2.6–2.7 times longer than its maximum width from humeri to 1/3 from the base, rounded at apexes with very small sutural teeth. On each elytron with two inner slightly raised costae and two outer very weakly expressed costae. Inner two costae start from humeri, subparallel to each other in basal part and connects in 1/4 from apex elytra. Disc punctured at base and fine granulated in other part.

Legs flattened, slender, length of femur about equal length of tibia. Legs brown-reddish, distal ends of femurs (especially profemurs), proximal ends of tibiae and most parts of tarsi are blackish. Lateral side of protibia, medial side of meso- and metatibia densely covered with short yellowish hairs. Medial side of profemur and protibia fine granulated, other parts of legs finely punctuated. Segment 1 of metatarsus longest, segment 2 shortest, segment 3 widest (it long equal wide), claw segment as long as segment 1+2 and half of segment 3. Segments 1 and 2 of pro- and mesotarsus shorter than in metatarsus.

Gula roughly sparsely granulated. Prosternum weakly granulated with large subvertical process on anterior margin, which constricted towards apex and covered with short hairs (Fig. 8).

Male terminalia. Tegmen slightly curved, shorter than penis; parameres narrowest at apical one fourth, with length about 5 times its width, gradually constricted towards apex, densely covered with long setae in apical part, sparsely covered with short setae in other parts; phallobase about 2 times as long as parameres, abruptly expanded near apical half, and constricted towards base (Fig. 13). Length of tegmen about 3 times as long as parameres. Penis slightly curved; median structures about 4/5 as long as penis, slightly curved in profile, rounded at apex; median lobe with obtuse apex;

penis about 1.6 times as long as tegmen (Fig. 15). Eight sternite broader than long, rounded at sides and emarginate at apex, with setae which are long at sides, and shorter and sparser at middle (Fig. 17). The edges of emargination form an angle of about 94°. Spiculum gastrale Y-shaped, slender, distinctly longer than eight sternite, about 9 times as long as spiculum relictum.



Figs 7–12. *Spinimegopis* spp. 7–9 – *S. bezborodovi* sp. n.: 7 – male paratype, head and pronotum, dorsal view; 8 – male paratype (the same specimen), prosternum, lateral view; 9 – the same, female paratype; 10–12 – *S. lividipennis*: 10 – male (Central Vietnam: Ngoc Linh), head and pronotum, dorsal view; 11 – male (the same specimen), prosternum, lateral view; 12 – female (North Vietnam: Lao Cai province, Sa Pa), prosternum, lateral view.

FEMALE (Figs 3, 9). Similar to male, antennae shorter (0.88 of body length); legs slenderer; pronotum slightly narrower (ratio maximum width / length 0.60–0.62), spine of anterior angle is more expressed.

MEASUREMENTS (mm). Body length (measured from the clypeus to the apex of elytra): males 35.3–42 mm (holotype: 35.3 mm), females 43–44 mm. Body width: males 10–12 mm (holotype 10 mm), females 12.2–14 mm.

DIAGNOSIS. The new species is most similar to *Spinimegopis lividipennis* (Lameere, 1920), but differs by following characteristics: relatively light brown-reddish coloration of body, specific black pattern of pronotum (in *S. lividipennis* body is dark reddish-brown, pronotum without any pattern) (Figs 1–7, 10); spine of anterior angle of pronotum in males is smaller, not acute; antennae in males is shorter (1.03–1.11 of body length, but in *S. lividipennis* 1.16–1.25), antennae in females is longer (0.88 of body length, but in *S. lividipennis* 0.70–0.75); antennal segments 1–3 and profemur less granulated, quantity of granules is about 1.3 times less for same surface than in *S. lividipennis* (Figs 7, 10). Ratio of lengths of antennal segments close to that of *S. lividipennis*, but segment 3 / scape is less (in new species 2.7–2.8; in *S. lividipennis* 3.0–3.1). Median furrow on dorsal side of head narrow and shallow (in *S. lividipennis* wide and deep between antennal tubercles) (Figs 1, 2, 4, 5, 7, 10). Process on anterior margin of prosternum is usually larger on average than that in *S. lividipennis* (Figs 8, 9, 11, 12). In male terminalia (Figs 13–18) parameres of tegmen is shorter, length of tegmen about 3 times as long as parameres (in *S. lividipennis* about 2.5 times). Eight sternite less emarginated, an angle between edges of emargination about 94° (in *S. lividipennis* about 81°); spiculum relictum is shorter, its length is 9 times smaller than that of spiculum gastrale (in *S. lividipennis* only 6 times). Also new species is similar to other South-East Asian species from *S. lividipennis* species-group, *S. fujitai* Komiya et Drumont, 2007 and *S. delahayei* Komiya et Drumont, 2007, but differs from them in the light brownish-yellow elytra (not brown and dark brown), more light color of body, specific pattern of pronotum and larger size of process of prosternum, as well as in sculpture of elytra.

DISTRIBUTION. Vietnam: Lam Dong province, Lang Bian (Dalat) Plateau.

ETYMOLOGY. New species is named in honor of coleopterologist Dr. Vitalii Bezborodov (Blagoveshchensk, Russia).

#### ***Spinimegopis lividipennis* (Lameere, 1920)**

Figs 4–6, 10–12, 14, 16, 18

*Megopis (Aegosoma) lividipennis* Lameere, 1920: 142. (lectotype – ♀, China: Yunnan; in the Royal Belgian Institute of Natural Sciences; designated by Komiya & Drumont, 2006).

MATERIAL EXAMINED. Thailand: Chiang Mai province, Fang, V 2014, 1 ♂, 1 ♀, local collector leg.; Vietnam: Lao Cai province, Sa Pa, V 2017, 1 ♀, local collector leg.; Yen Bai province, Van Chan district, Tu Le Commune, V 2017, 1 ♀, local collector leg.; Kon Tum province, Dak Glei district, Ngoc Linh, 15°02' N, 107°56' E, 1650 m, IV–V 2016, 2 ♂, Van Dang leg.



Figs 13–18. *Spinimegopis* spp., male terminalia. 13, 15, 17 – *S. bezborodovi* sp. n., holotype: 13 – tegmen; 15 – penis; 17 – eighth sternite; 14, 16, 18 – *S. lividipennis* (Central Vietnam: Kon Tum province, Ngoc Linh): 14 – tegmen; 16 – penis; 18 – eighth sternite. Scale bars = 1 mm.

DISTRIBUTION. South China: Yunnan and Sichuan provinces; Myanmar: Knakaya; North Thailand: Chiang Mai province; Laos: Xiangkhoang; North and Central Vietnam: provinces Lao Cai; Vinh Phuc (Komiya & Drumont, 2007); Yen Bai (new record); Kon Tum (new record).

NOTES. *Spinimegopis lividipennis* was described from South China (Yunnan province); lectotype is female, kept in Royal Belgian Institute of Natural Sciences (RBINS). High resolution photos of the lectotype are available on the website of RBINS (RBINS, 2017). In paper of Komiya & Drumont (2007) written that length of antennae in males *S. lividipennis* is 1.03–1.10 of body length. According to my measurements it value is 1.16–1.25. Komiya & Drumont (2007) also written that ratio of lengths of antennal segment 3 and scape is 3.7–3.8; by my measurements it

is 3.0–3.1. These differences are probably due to the use of different measurement methods. My measurements were made using high resolution photographs of specimens with tenfold magnification power using a ruler and a curvimeter (for measuring curved antennae).

## DISCUSSION

*Spinimegopis lividipennis* species-group in addition to the *S. lividipennis* and *S. bezborodovi* sp. n. includes three more species: *S. malasiaca* (Hayashi, 1976) (distributed in the Cameron Highlands in West Malaysia), *S. fujitai* Komiya et Drumont, 2007 (North Vietnam: Lao Cai, Cao Bang, Vinh Phuc provinces; South and Central China: Guizhou, Hubei provinces) and *S. delahayezi* Komiya et Drumont, 2007 (North Myanmar: Kachin, Chin states; South China: Yunnan province) (Komiya & Drumont, 2007). Only two species of genus *Spinimegopis* (in the general sense) found in the southern half of Vietnam, *S. lividipennis* and *S. bezborodovi* sp. n. By the complex of morphological features, *S. bezborodovi* sp. n. is closest to the *S. lividipennis*.

*S. bezborodovi* sp. n. is probably endemic to Lang Bian Plateau (South Vietnam) and inhabits mountain forests at altitudes of about 1500 m. The nearest location of closest species *Spinimegopis lividipennis* is the Ngoc Linh Mountain in Kon Tum province (Central Vietnam), situated in about 330 km north-west of the type locality of *S. bezborodovi* sp. n. Up to now, sympatric areas in the distribution of these species are unknown. The Ngoc Linh mountain massif and the Lang Bian Plateau are isolated from each other by low mountains with average altitudes of 250 to 600 m. The South-East Asian species of *Spinimegopis lividipennis* species-group are medium- and high-mountainous, only *S. lividipennis* may be found at lower altitude at about 1000 m (Komiya & Drumont, 2007).

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